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STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING AND IRRIGATION

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BULLETIN No. 2

PROCEDURE FOR SECURING
STATE APPROVAL OF
*Formation of Irrigation Districts
Issuance of Bonds by Irrigation Districts
Expenditure of Construction Funds
by Irrigation Districts
Construction of Dams*

BEFORE

STATE DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING AND IRRIGATION
(Formerly the State Department of Engineering)
OFFICE: 627 Forum Building, Sacramento, Cal.

and

CALIFORNIA BOND CERTIFICATION COMMISSION
OFFICE: Merchants National Bank Building, San Francisco, Cal.

under

Chapter No. 189 of the Statutes of 1897 with amendments thereto
(California Irrigation District Act)

Chapter No. 366 of the Statutes of 1913 with amendments
and supplementary legislation
(Act creating the California Bond Certification Commission)

Chapter 377 of the Statutes of 1917
(Providing for State supervision of dams)

July 1, 1922



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FORMATION OF IRRIGATION DISTRICTS.

The California Irrigation District Act requires that a petition be presented to the board of supervisors of the county in which the proposed district or the greater portion thereof is situated, praying that the territory as set forth therein may be organized as an irrigation district. This petition shall set forth generally the boundaries of the proposed district and also shall state generally the source or sources (which may be in the alternative) from which said lands are proposed to be irrigated. On or before the day on which this petition is presented to the board of supervisors, a copy must be filed in the office of the state engineer.

The state engineer requires that a map or maps draughted to suitable scales accompany the copy of the petition filed in his office and that this map or maps show

1. The general location of proposed district and source of water supply;
2. The approximate boundary of the proposed district;
3. The approximate divisions of property ownership in the proposed district with name of holder of title to each:

and further requires that the name and address of the engineer and attorney advising on the formation of the district (if any are employed) be submitted with the copy of the petition filed in his office.

Upon receipt of a copy of a resolution from the board of supervisors finding that the petitioners have complied with the requirements of the law, the state engineer shall make or cause to be made such preliminary investigations as may be practicable, with a view to determining the feasibility of the proposed project. He shall report to the board of supervisors within ninety days from the date of the adoption of the resolution, unless upon request, the board grants an additional ninety days for investigation. The board of supervisors holds the final hearing on the petition following the filing of the report by the state engineer.

ISSUANCE OF BONDS BY IRRIGATION DISTRICTS.

The California Irrigation District Act requires that the board of directors of irrigation districts cause to be made such surveys, examinations, drawings, and plans as shall furnish the proper basis for an estimate by said board of the amount of money necessary to be raised whenever it is contemplated raising money by issuing bonds for the purchase of property or otherwise carrying out the provisions of the act. All such surveys, examinations, drawings and plans are required to be made under the direction of a competent irrigation engineer and to be certified by him.

A copy of the board's estimate of the amount of money necessary to be raised and the engineer's report is required to be submitted to the California Bond Certification Commission and that this commission examine the estimate and report and any data in its possession or in the possession of the district and make such additional surveys and examinations at the expense of the district as it may deem proper and that this commission report to the directors of the district on the advisability of proceeding with the proposed bond issue.

The commission requires that these estimates and engineers' reports be submitted in duplicate.

The California Bond Certification Commission requires that the estimate and report submitted by the district cover the following points:

1. Description of present agricultural conditions in district.
2. Nature of soil as to its fertility and susceptibility to irrigation and productivity under irrigation.
3. Climate.
4. Crops adapted to district under irrigation and estimated yields.
5. Present land values and total assessed valuation of district and probable increase in land values with project completed.
6. Amount of water required for irrigation of district.
7. Available water supply.
8. Ground water conditions and need for drainage.
9. Proposed plan of development for complete and satisfactory project.
10. The cost of works, water rights and other property and contingent expense necessary therefor.
11. Proposed construction program for complete project.
12. Present proposed bond issue and schedule of disbursement setting forth all items for which bond money is to be spent and the estimated cost thereof and the portion of the entire project which will be completed thereby.

It is further required that suitable maps, plans, profiles and sketches be submitted with the report to set forth and illustrate its contents.

The commission also requires that a complete transcript of the proceedings in the organization of the district certified to by the county clerk of the county in which the petition was filed, be forwarded to the commission.

Papers to be included in transcript of organization proceedings.

1. Petition to board of supervisors for organization of irrigation district, showing signatures and acknowledgments.
2. Notice stating time of presenting petition to board of supervisors.
3. Affidavit of publication of notice and petition, with printed copies attached.
4. Bond to cover costs of organization of district.
5. Evidence of filing copy of petition with state engineer on or before date of hearing.
6. Declarations of intention of petitioners to withdraw signature, showing acknowledgment and filing, or statement from county clerk that none have been filed.
7. Resolution of board of supervisors continuing hearing.
8. Resolution of board of supervisors determining that petition complies with law and that notice has been duly published and directing that copy of this resolution be forwarded to state engineer, and continuing further hearing until after report received from state engineer.

9. Evidence of forwarding copy of resolution of board of supervisors to state engineer.
10. Resolution of board of supervisors granting state engineer additional time to report.
11. Report of state engineer on feasibility of proposed project, showing date filed with board of supervisors.
12. Resolution of board of supervisors setting time for final hearing.
13. Affidavit of mailing to party designated in petition or publishing notice of final hearing.
14. Resolution of board of supervisors continuing hearing.
15. Resolution of board of supervisors, reaffirming its conclusions, defining boundaries of proposed district, dividing district into divisions, and calling an election to vote on organization and officers.
16. Affidavit of publication of notice of election, with printed copy attached.
17. Printed copy of ballot.
18. Canvass of votes and declaration of result by board of supervisors with order declaring district duly organized and persons named duly elected.
19. Evidence of filing certified copies of final order declaring the district organized and the results of the election with county clerk and recorder of every county in which any portion of the district lies.
20. Certificate from county clerk of county where petition filed, that no election contest has been filed within twenty days from declaration of result.

Prior to the commission's placing its approval upon any proposed bond issue, the following papers must be submitted:

1. Schedule of bonds and their maturities as proposed to be set forth in the notice of election.
2. Certified copy of last equalized county assessment roll covering all lands in district, and showing each holder of title and assessed value of each holding.
3. Copies of all contracts, or options for purchase of water rights, easements (except rights of way within district) constructed works, or other properties from proceeds of proposed bond issue.
4. Copies of water permits and other documents establishing right to sufficient water to irrigate proposed district.

The law provides that the expense of these investigations and the work of the bond commission be borne by the district. It is therefore required that the estimate and engineer's report be accompanied by a payment to cover these costs which have been fixed as follows:

Minimum charge of \$450 for issues less than \$300,000.
\$0.0015 for issue of \$300,000 up to and including \$1,000,000.
\$0.00125 for next \$500,000 issued.
\$0.00075 for next \$500,000 issued.
\$0.000375 for any amount in excess of \$2,000,000.

CERTIFICATION OF BONDS OF IRRIGATION DISTRICT.

The law requires that whenever the board of directors of the irrigation district desire to have bonds of the district certified as legal investment for trust funds or for funds of insurance companies, banks, trust companies, state school funds, and similar funds, they shall file a certified copy of a resolution requesting such action with the California Bond Certification Commission. The commission is then required to investigate the affairs of the district, at the district's expense, and report upon the same to the state controller.

For this purpose, the commission requires that a complete transcript of the proceedings in the issuance of the bonds certified by the secretary of the district be filed in their office.

Papers to be included in transcript of bond proceedings.

1. Resolution of board of directors appointing an irrigation engineer and directing preparation of plans and specifications.
2. District engineer's report on proposed irrigation system.
3. Resolution of board of directors adopting engineer's report, estimating amount of money necessary to be raised, and ordering copy of estimate and report to be submitted to California Bond Certification Commission.
4. Report of bond commission to board of directors on advisability of bond issue.
5. Resolution of board of directors declaring plan satisfactory and project feasible, and determining amount of bond issue.
6. Petition to board of directors requesting calling of bond election, or resolution of board of directors calling special election to vote on bonds.
7. Affidavit of publication of notice of election, with printed notice attached.
8. Affidavit of posting notice of election.
9. Printed copy of ballot.
10. Canvass of votes and declaration of result by board of directors.
11. Resolution of board of directors ordering bonds to be issued and prescribing their form and other details.
12. Resolution of board of directors declaring its desire to have bonds made available for investment of trust funds, etc., and requesting California Bond Certification Commission to make an investigation and report.

After any issue of bonds of a district have been certified, it is unlawful for that district to issue subsequent bonds without their certification. Subsequent issues of bonds may be certified upon like proceedings as for certification of the first issue.

CONSTRUCTION UNDER BOND ISSUES OF IRRIGATION DISTRICTS.

Change in plans.

It is unlawful for a district to materially change any plans for construction under a bond issue which has received the approval of the California Bond Certification Commission without the consent of the commission. Therefore, whenever the board of directors desire to alter the plans for construction, a resolution so stating and clearly setting forth proposed change in plans should be adopted and application made to the bond commission for approval of the change in plans. It should be accompanied by such maps, plans, profiles or other drawings as may be necessary to clearly set forth the proposed change. All applications for change in plans together with maps, plans, etc., should be filed in duplicate with the bond commission.

Sale of bonds.

It is unlawful for districts to sell bonds at a private sale unless approved by the California Bond Certification Commission. In applying for approval of private bond sale the following papers, certified by the secretary of the district, should be filed with the Bond Commission:

1. Copy of minutes of meeting of the board of directors containing resolution declaring intention to sell a specified amount of bonds and the day, hour, and place of such sale.
2. Affidavit of publication of notice of bond sale for three weeks in some newspaper published in the county where the office of the board of directors is located, with printed notice attached.
3. Copy of resolution of board of directors rejecting all bids or declaring no award will be made.
4. Copy of resolution of board of directors approving private sale of bonds.

It is unlawful, whenever the bonds of an irrigation district have been certified by the California Bond Certification Commission to sell bonds without the written approval of the Bond Commission. In applying for the approval of the sale of certified bonds the following papers, certified by the secretary of the district, should be filed with the Bond Commission:

1. Copy of minutes of meeting of the board of directors containing resolution declaring intention to sell a specified amount of bonds and the day, hour, and place of such sale.
2. Affidavit of publication of notice of bond sale for three weeks in some newspaper published in the county where the office of the board of directors is located, with printed notice attached.
3. Copy of resolution of board of directors making the award for sale of bonds.

The law further provides that whenever the bonds of any irrigation district have been certified, as provided in this act, no expenditure of any kind shall be made from the construction fund of such district without the consent of the commission, and no obligation shall be incurred chargeable against such fund without previous authorization of the commission nor shall any expense of any kind be incurred in excess of money actually provided by levy of assessment or otherwise.

It is therefore necessary to apply to the commission for approval of all proposed expenditures from the construction fund prior to initiation of the work. Such application for approval should be accompanied by a schedule of proposed expenditures. Section 53 of the California Irrigation District Act provides that bids shall be called for on all construction work. The plans, specifications and contract under which bids are to be requested, together with a copy of the resolution of the board of directors approving same and directing the advertising for bids, should be forwarded for approval by the commission. Finally, copies of the bids received and proposed award of contract should be forwarded for the approval by the commission.

If all bids are rejected and the directors of the district desire to proceed with the construction of works under their own superintendence, copy of the resolution so stating and rejecting all bids should be forwarded for approval by the commission.

All papers relative to expenditures from the construction funds of irrigation districts which require the approval of the commission are to be filed in triplicate with the state engineer. One copy will be returned to the district stamped with the approval of the commission when so approved.

Inspections of works constructed and audits of the accounts of the districts will be made from time to time by the commission to know that the works are being constructed and the money being spent only as approved by the commission.

The law further requires that during the construction of any works to be paid for from the proceeds of the sale of any bonds of an irrigation district, the secretary of the board of directors shall forward copies of all reports made to the board as to the progress of the work together with a statement of the amounts paid for the doing of any part of the work to the office of the state engineer not later than one week after each regular meeting of the board.

This report is required to be submitted in the following form:

----- Irrigation District.

REPORT ON CONSTRUCTION FUND.

----- Secretary Month of -----

Receipts:

Bond sale authorized (date) ----- \$-----
Bond sale authorized (date) -----
Accrued interest on bonds -----
Refunds -----
Interest on bank deposits -----
Total ----- \$-----

Expenditures:

Approved by California Bond Certification Commission				Current month		Net expenditure to date	Unex- pended balance
Item of estimate	Amount of estimate	Expenditure authorized	Date of authoriza- tion	Expended	Refund		

It is further required that copies of the minutes of all meetings of the boards of directors of every irrigation district holding certified bonds or unspent funds derived from the sale of certified bonds, be forwarded to the office of the state engineer immediately after every meeting of the board.

ANNUAL REPORT TO STATE ENGINEER.

The law requires that every irrigation district publish a verified statement of its financial condition immediately following its regular monthly meeting in January of each year. This statement is required to show particularly the receipts and disbursements of the last preceding year, together with the source of such receipts and the purpose of such disbursements. A copy of this statement is required to be filed in the office of the state engineer immediately following publication. The law further requires that a report accompany this statement, stating the general condition of any works constructed or acquired by said district and whether or not the plan of irrigation adopted by the district is being successfully carried out and any other matters which the board may deem proper. The state engineer after examining this statement and report shall make such recommendations and comments as he may deem proper, to the board of directors of the district.

SUPERVISION OF DAM CONSTRUCTION.

By the Division of Engineering and Irrigation of the
Department of Public Works.

(Formerly State Department of Engineering.)

Extract from Chapter 377 of the 1917 Statutes.

SEC. 2. (a) All dams in the State of California, other than those for impounding mining debris constructed under the authority of the California debris commission, or dams constructed by a municipal corporation maintaining a department of engineering, shall be under the authority of the state department of engineering, and the department shall exercise supervision over any dam, the failure of which would endanger life or property, and shall have power to prescribe and enforce compliance with measures for making such dams safe against failure; *provided*, that this section shall not apply to any dam which is part of a "water system" as defined in section two of the public utilities act of this state, and nothing in this act shall be construed to limit the jurisdiction of the railroad commission over such dams.

(b) It shall be unlawful for any person, firm, corporation or district to construct, maintain or operate any dam known to be unsafe, or which if the destruction or failure thereof would endanger life or property; or to construct, reconstruct, repair or improve, maintain or operate any dam which is or would be ten feet or more in height or which will impound water or other fluid to the amount of three million gallons unless the plans, specifications and construction thereof shall have been approved in writing by the state department of engineering.

(c) Any person, firm, corporation or district who shall violate the provisions of this section is subject to a penalty of not less than five hundred or more than two thousand dollars for each and every offense. Each day that such violation of the provisions of this section shall continue shall be deemed and considered a separate and distinct offense.

(d) Any person acting for himself as owner, or as director, officer, agent or employee of any firm, corporation or district engaged in the construction, reconstruction, improvement or repair of any dam, the plans and specifications of which have been approved by the department of engineering, or any contractor, or agent or employee of such contractor, who shall knowingly permit work to be executed thereon contrary to the plans and specifications approved as aforesaid, or any inspector or employee of the department of engineering who shall have knowledge of such work being done and fail to immediately notify the department of engineering thereof, is guilty of a felony and subject to the penalty of confinement in the state penitentiary for not less than one nor more than five years.

(e) Upon the complaint of the department of engineering any district attorney is hereby authorized and directed to prosecute violations of the provisions of this section.

Plans and specifications for dams.

The law requires the approval of the state engineer on the plans and specifications of all dams before construction starts except dams constructed by public utilities under the jurisdiction of the railroad com-

mission, under authority of the California debris commission or by a municipal corporation maintaining a department of engineering.

Plans should be submitted for approval on tracing linen drawn to suitable scale. Single sheets should not be smaller than 18 x 24 inches nor larger than 36 x 48 inches. Space 1" x 3" should be left below the title on each sheet for approval. Tracings will be returned after examination.

Plans should set forth the following:

1. General layout showing location of dam referred to public land surveys, the reservoir, spillways, outlets, tunnels, borrow pits or other features of the proposed plans.
2. Topographic map of damsite on suitable scales showing dam superimposed on ground contours.
3. Profile on center line of dam showing ground surface elevations, elevation of dam foundations, and other structural features of dam, high water line and elevation of top of dam, spillways, control works and auxiliary structures and graphic log of test pits and borings made.
4. Cross-section of dam at point of maximum height and typical cross-sections at other points where the section may be varied.
5. Sheets showing structural details of dam, spillways, outlets, tunnels, sluices, fish ladders or other structural features including stress sheet for masonry or concrete dams.
6. Contour map of reservoir setting forth tabulations or diagrams of water surface area and storage capacity for the several elevations of water surface.

Specifications and supplementary information for the construction of the dam and appurtenant structures should be forwarded in duplicate and should include the following:

1. Specifications for the construction of the dam and appurtenant structures, setting forth description of materials to be used, methods to be employed in construction, and construction program.
2. Proposed contract for construction (if work is to be contracted).
3. Detailed estimates of cost.
4. Geologic reports and records of geologic examinations of dam site. Also description of materials and records of test pits and borings which may have been made.
5. Hydraulic elements of design of spillways and outlets.
6. Data on stream flow and especially on maximum rate of flood discharge. Reference only need be made to published data setting forth dates between which records have been kept.
7. Description of watershed tributary to reservoir giving area, description of character of surface covering, whether soil or bare rock, slopes of ground surface and conditions of forestation.

Inspection of dam construction.

Inspection of the work during construction and of completed structures will be made by the state engineer and a certificate of approval issued on work satisfactorily completed. Parties proposing to construct a dam must have approval of the plans, specifications and location of dam before construction is started. At least two weeks notice must be given the office prior to the date on which inspection is desired. Reports on construction and progress must be made as may be required in each instance.

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